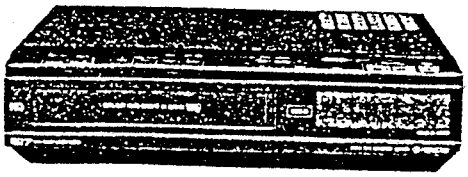
HITACHI

SERVICE MANUAL

TK | No.3040E

VT-517E(GK)



Technical Data

SPECIFICATIONS

Format:	VHS PAL Standard
Recording:	Rotary Two-Head Helical Scan Azimuth Recording
Tape Speed:	23.39 mm/sec.
Tape Width:	12.7 mm
Operation Temperature:	5°C to 40°C
Video:	PAL colour (system B/G and D/K) & SECAM colour (system B/G and D/K)
Recording Time:	240 min. (with E-240 cassette)
Aerial Input:	VHF channels 2 — 12 CATV channels S1 — S20 UHF channels 21 — 69
RF Output:	UHF channels 37 (30 — 39 adjustable) (System G or K)
Video Input:	0.5 to 1.5V p-p 75 ohm Unbalanced
Video Output:	1V p-p 75 ohm Unbalanced
S/N Ratio (Video):	43 dB
S/N Ratio (Audio):	43 dB
Horizontal Resolution:	Colour 260 lines
Audio Input:	—8 dBm 10 Kohm
Audio Output:	—8 dBm 1 Kohm
Audio Frequency Range:	70 Hz to 12 kHz
Fast Forward/Rewind Time:	About 7 minutes (with E-240 cassette)
Power:	AC 220V, 50 Hz
Power Consumption:	23W (including timer)
Timer:	24 hour digital indication
Cabinet Size:	370 mm(W) x 99 mm(H) x 264 mm(D)
Weight:	5.4 kg
Accessory Included:	1 — Aerial cable 1 — Infrared remote control unit 2 — Batteries

* Design and specifications are subject to change without notice.

VHS

This video deck is a VHS type video recorder. For proper operation, only the VHS type cassette must be used.

SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT

VIDEO CASSETTE RECORDER

March 1989 TOKAI WORKS

ELECTRIC CIRCUIT ADJUSTMENT

Test equipment and tapes necessary for adjustment.

1) Dual-trace oscilloscope
2) Colour bar generator
3) VTVM
4) DC voltmeter
5) Frequency counter
6) Monitor TV
7) Alignment tape (PAL, SECAM)
8) Blank tape

Servicing Position

Remove the top cover (see CASE REMOVAL) and perform adjustments from the solder side of the main circuit board.

Cautions on adjustments

1) If there are no special instructions, the following conditions apply:
   - O Oscilloscope probe: 10:1
   - O Oscilloscope synchronization: Auto-Sync
   - O Tracking control: Centre position
2) When making more than one adjustment, make adjustments in the order listed.

Resetting microprocessors

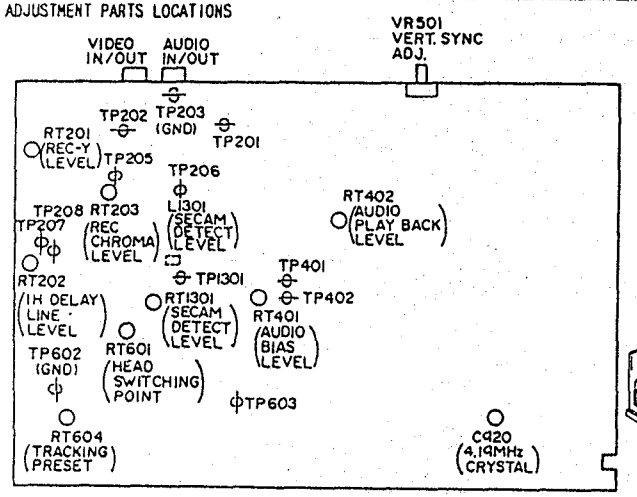
Since the microprocessors in this unit are backed up for 5 seconds, pull out the mains lead from the AC outlet and re-insert it after 5 seconds to reset the microprocessors.

To set tracking to the centre

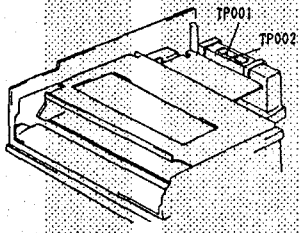
When "Tracking control: Centre position" is specified, centre the tracking as follows.

- o Press S702 (TRACKING UP) and S706 (TRACKING DOWN) on the main circuit board simultaneously.

ADJUSTMENT PARTS LOCATIONS

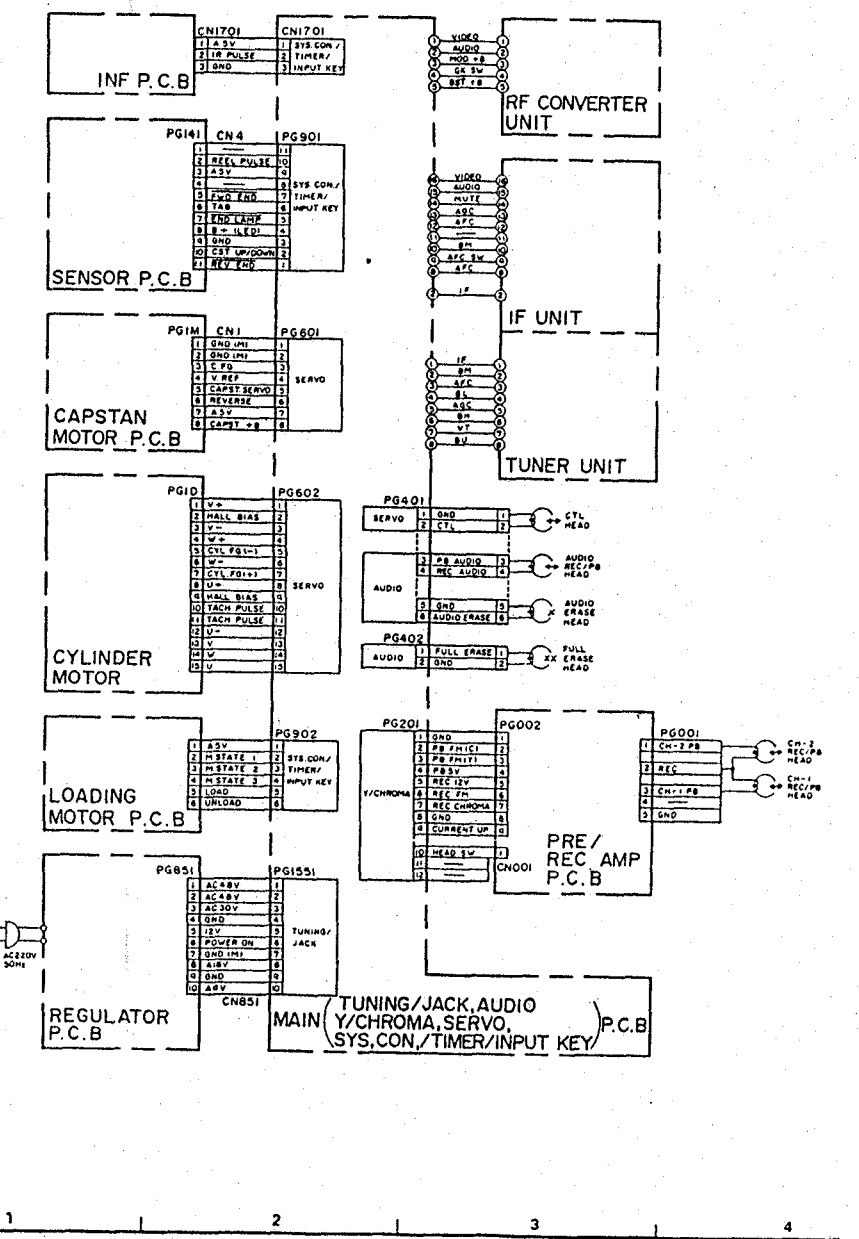


MAIN CIRCUIT BOARD (Solder Side)

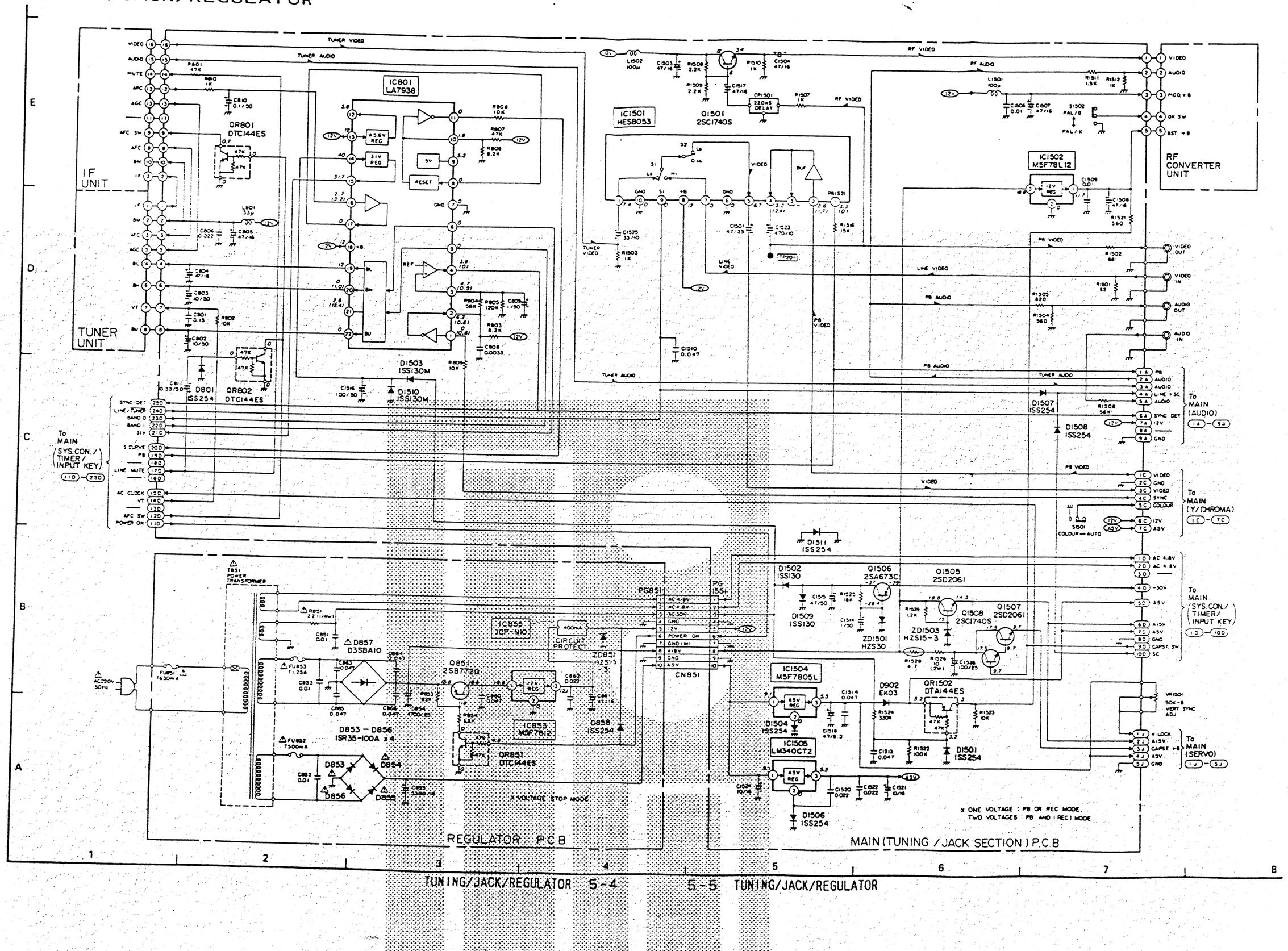


PRE/REC AMP CIRCUIT BOARD

INTERNAL WIRING DIAGRAM



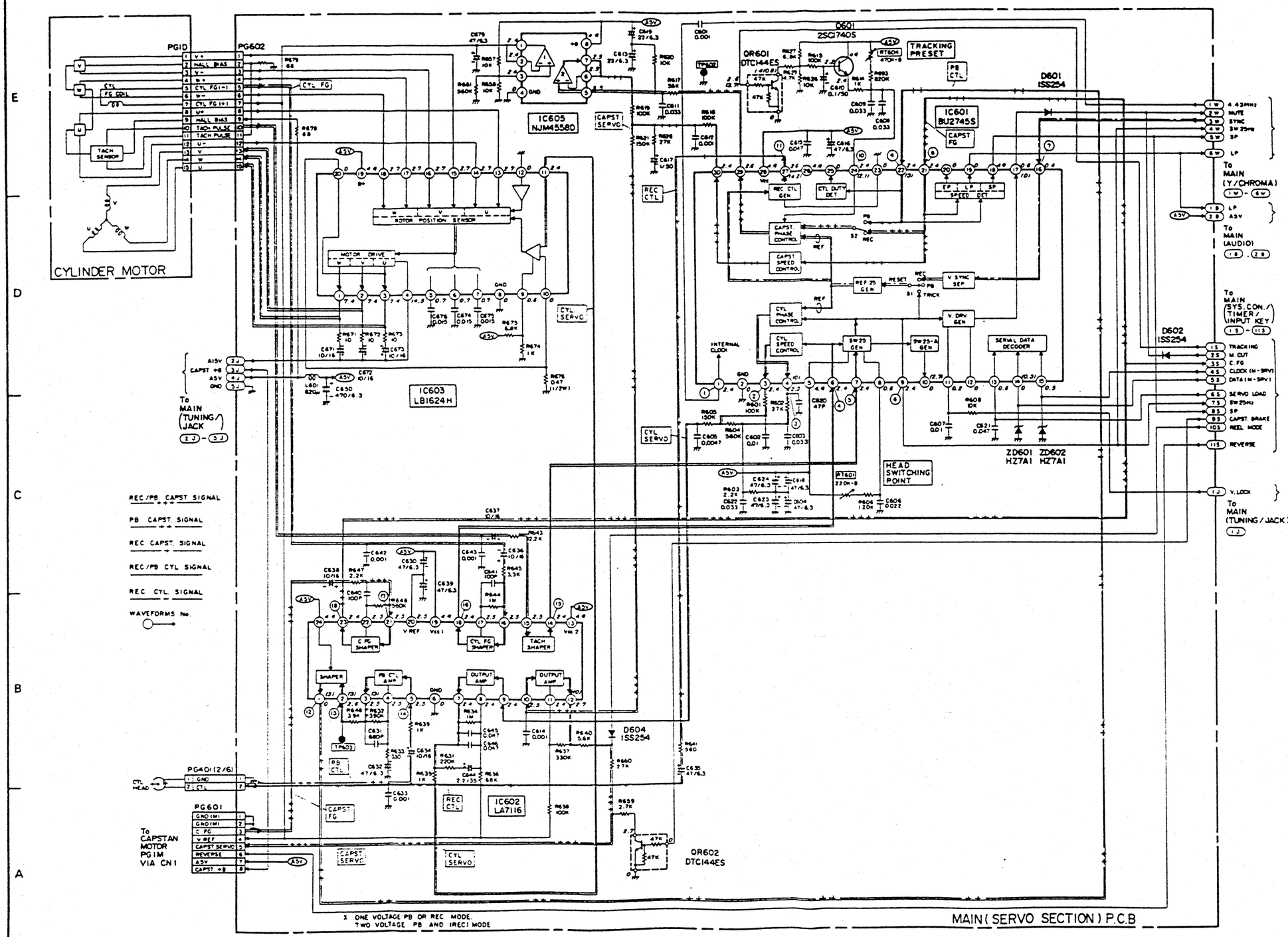
TUNING/JACK/REGULATOR



TUNING/JACK/REGULATOR 5-4

5-5 TUNING/JACK/REGULATOR

SERVO



REC/PB CAPST SIGNAL

PB CAPST SIGNAL

REC CAPST SIGNAL

REC/PB CYL SIGNAL

REC CYL SIGNAL

WAVEFORMS No.

X ONE VOLTAGE PB OR REC MODE.
TWO VOLTAGE PB AND (REC) MODE

1 IC601-1 210ns/0.7Vp-p REC/PB	2 IC601-3 0.9µs/5Vp-p REC/PB
3 IC601-4 0.9µs/5Vp-p REC/PB	4 IC601-6 3.3ms/4Vp-p REC/PB
5 IC601-7 40ms/4Vp-p REC/PB	6 IC601-9 40ms/5Vp-p REC/PB
7 IC601-16 64µs/5Vp-p REC/PB	8 IC601-21 650µs/4Vp-p REC/PB
9 IC601-22 40ms/4Vp-p REC/PB	10 IC601-24 40ms/2.5Vp-p REC/PB
11 IC601-27 40ms/5Vp-p REC	12 IC602-1 40ms/4Vp-p REC/PB
13 IC602-2 40ms/4Vp-p REC/PB	14 IC602-5 40ms/0.5Vp-p REC/PB
15 IC602-14 40ms/4Vp-p REC/PB	16 IC602-18 3.3ms/4Vp-p REC/PB
7 IC602-2 640µs/0.4Vp-p REC/PB	18 IC602-23 640µs/4Vp-p REC/PB

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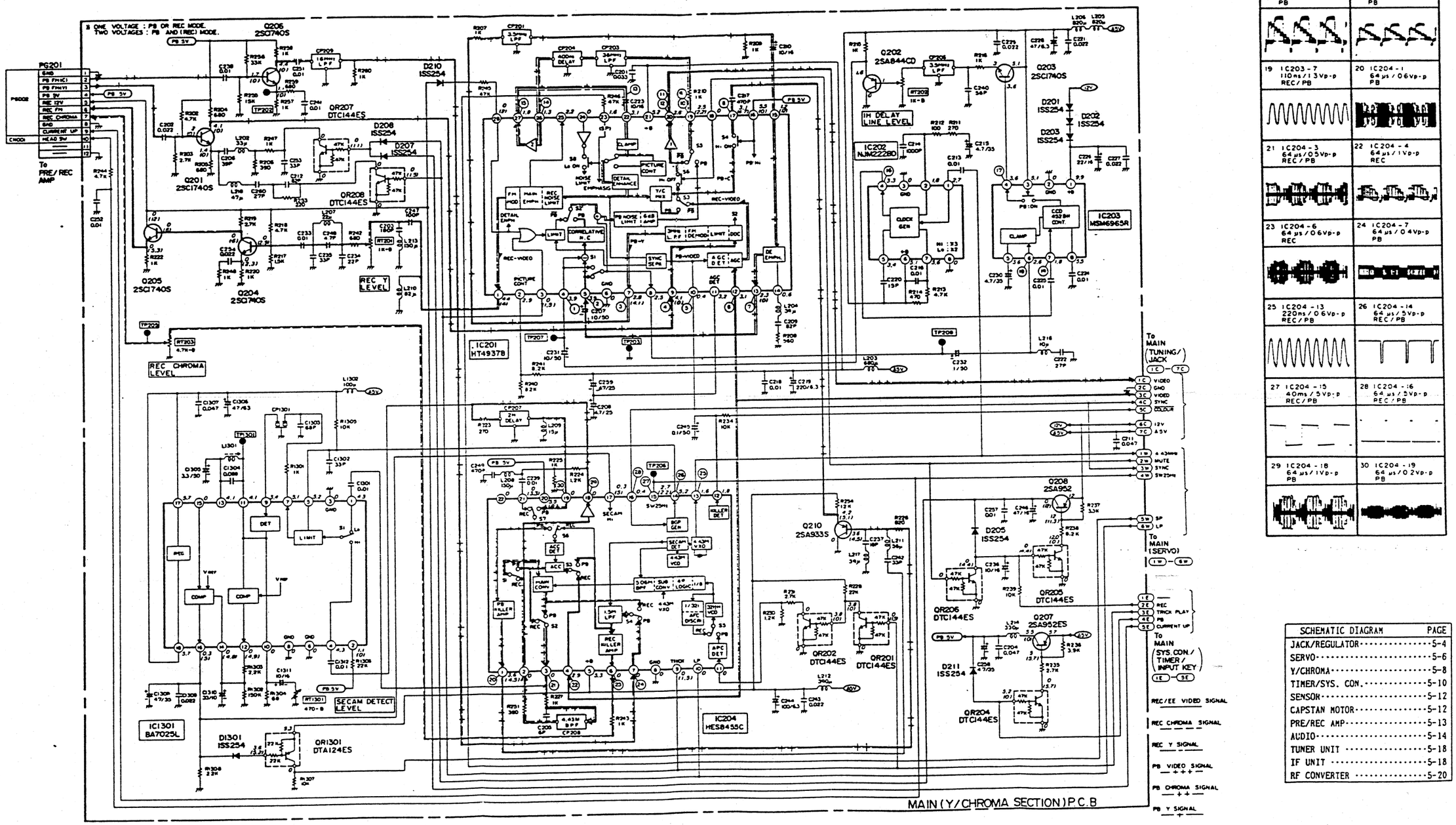
Y/CHROMA

1 IC201-4 64µs/0.6Vp-p PB	2 IC201-5 64µs/0.5Vp-p PB	3 IC201-7 64µs/0.6Vp-p PB	4 IC201-9 0.6Vp-p PB 3.25MHz 5Vp-p	5 IC201-10 64µs/5Vp-p REC/PB	6 IC201-12 64µs/1Vp-p REC	7 IC201-13 64µs/0.5Vp-p PB	8 IC201-17 64µs/0.5Vp-p PB	9 IC201-19 64µs/1Vp-p REC	10 IC201-19 64µs/1.3Vp-p PB	11 IC201-20 64µs/2Vp-p REC	12 IC201-20 64µs/2Vp-p PB	13 IC201-22 64µs/0.6Vp-p REC/PB	14 IC201-26 64µs/0.6Vp-p REC/PB	15 IC201-27 64µs/0.6Vp-p REC/PB	16 IC202-4 110ns/1.3Vp-p REC/PB
17 IC203-4 64µs/2Vp-p PB	18 IC203-6 64µs/0.5Vp-p PB	19 IC203-7 110ns/1.3Vp-p REC/PB	20 IC204-1 64µs/0.6Vp-p PB	21 IC204-3 64µs/0.5Vp-p REC/PB	22 IC204-4 64µs/1Vp-p REC	23 IC204-6 64µs/0.6Vp-p REC	24 IC204-7 64µs/0.4Vp-p PB	25 IC204-13 220ns/0.6Vp-p REC/PB	26 IC204-14 64µs/5Vp-p REC/PB	27 IC204-15 40ms/5Vp-p REC/PB	28 IC204-16 64µs/5Vp-p REC/PB	29 IC204-18 64µs/1Vp-p PB	30 IC204-19 64µs/0.2Vp-p PB		



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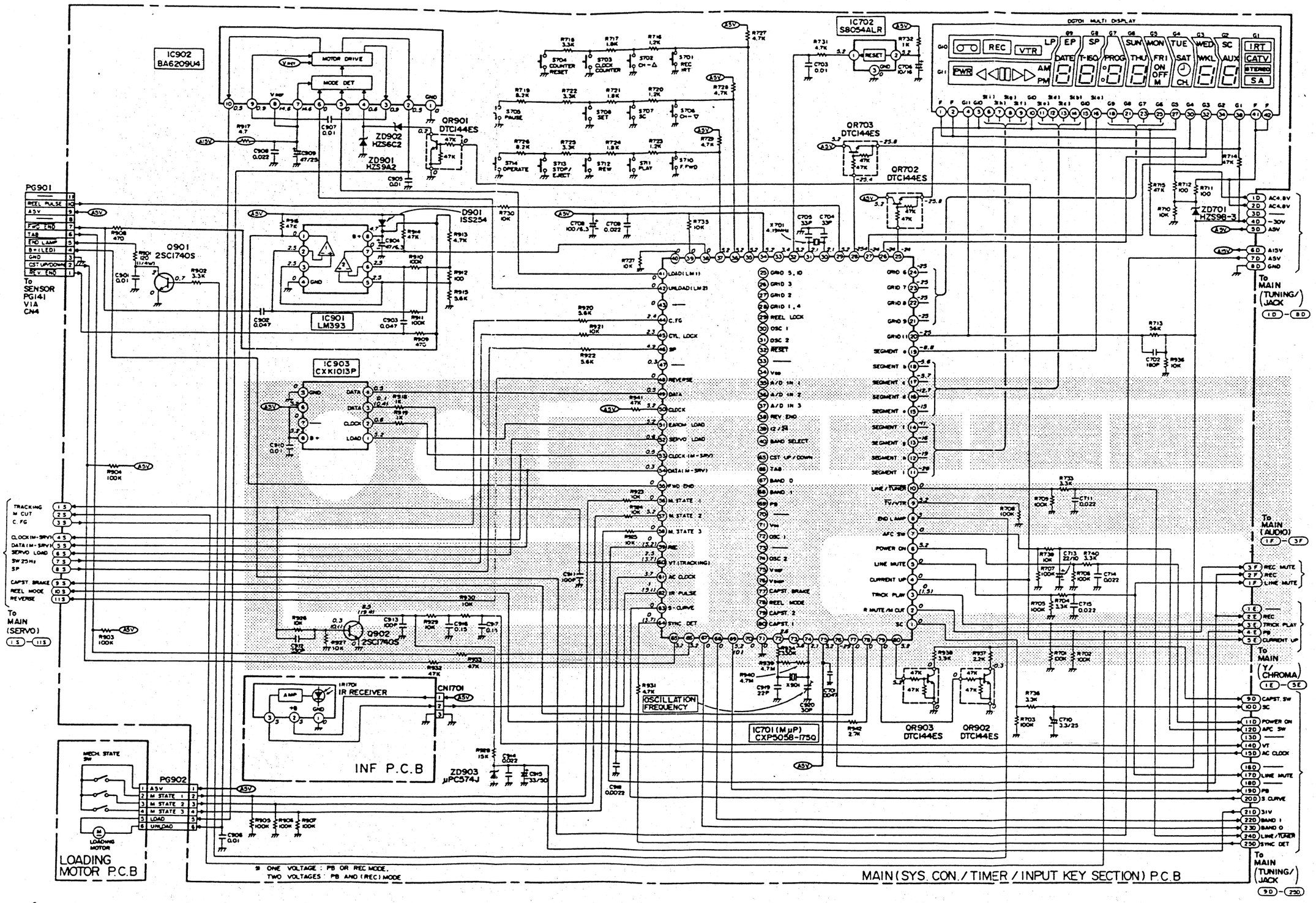
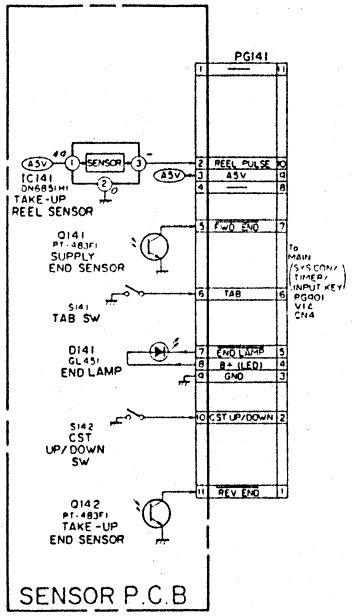
TIMER/SYSTEM CONTROL

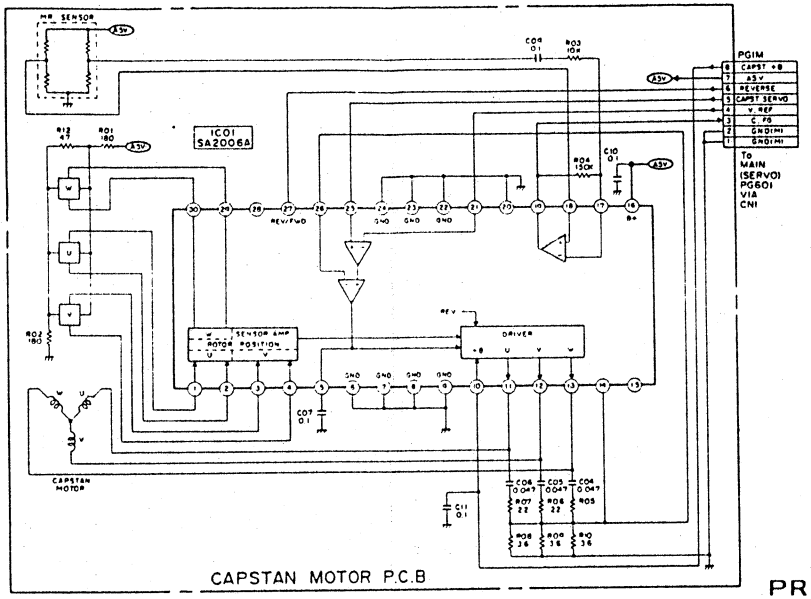


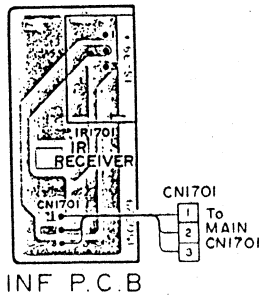
SENSOR

CAPSTAN MOTOR

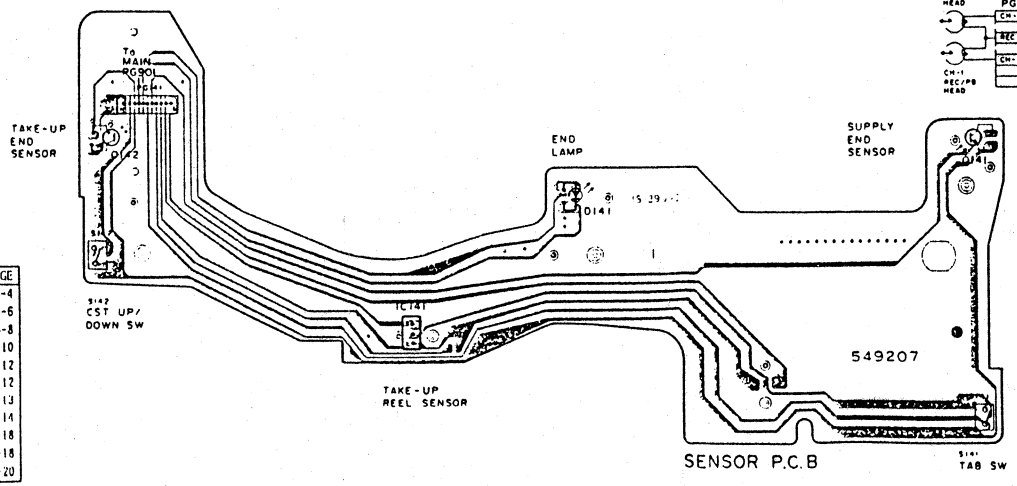
INF CIRCUIT BOARD



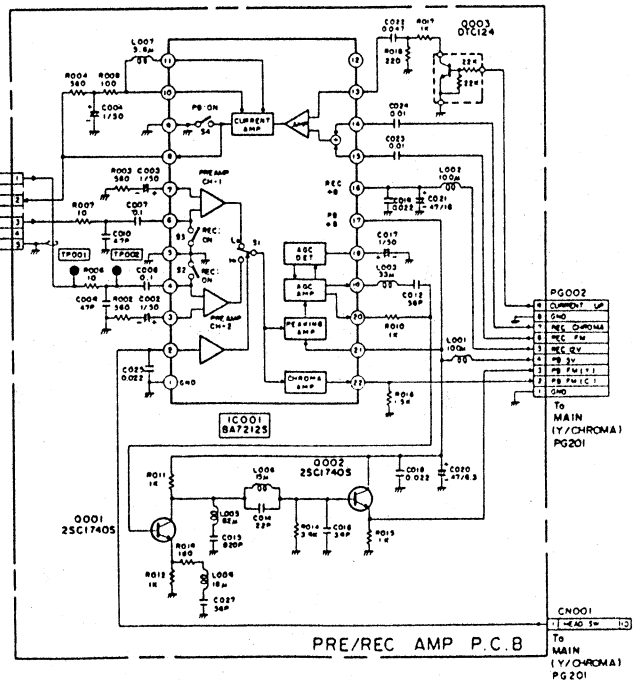




SENSOR CIRCUIT BOARD



PRE/REC AMP



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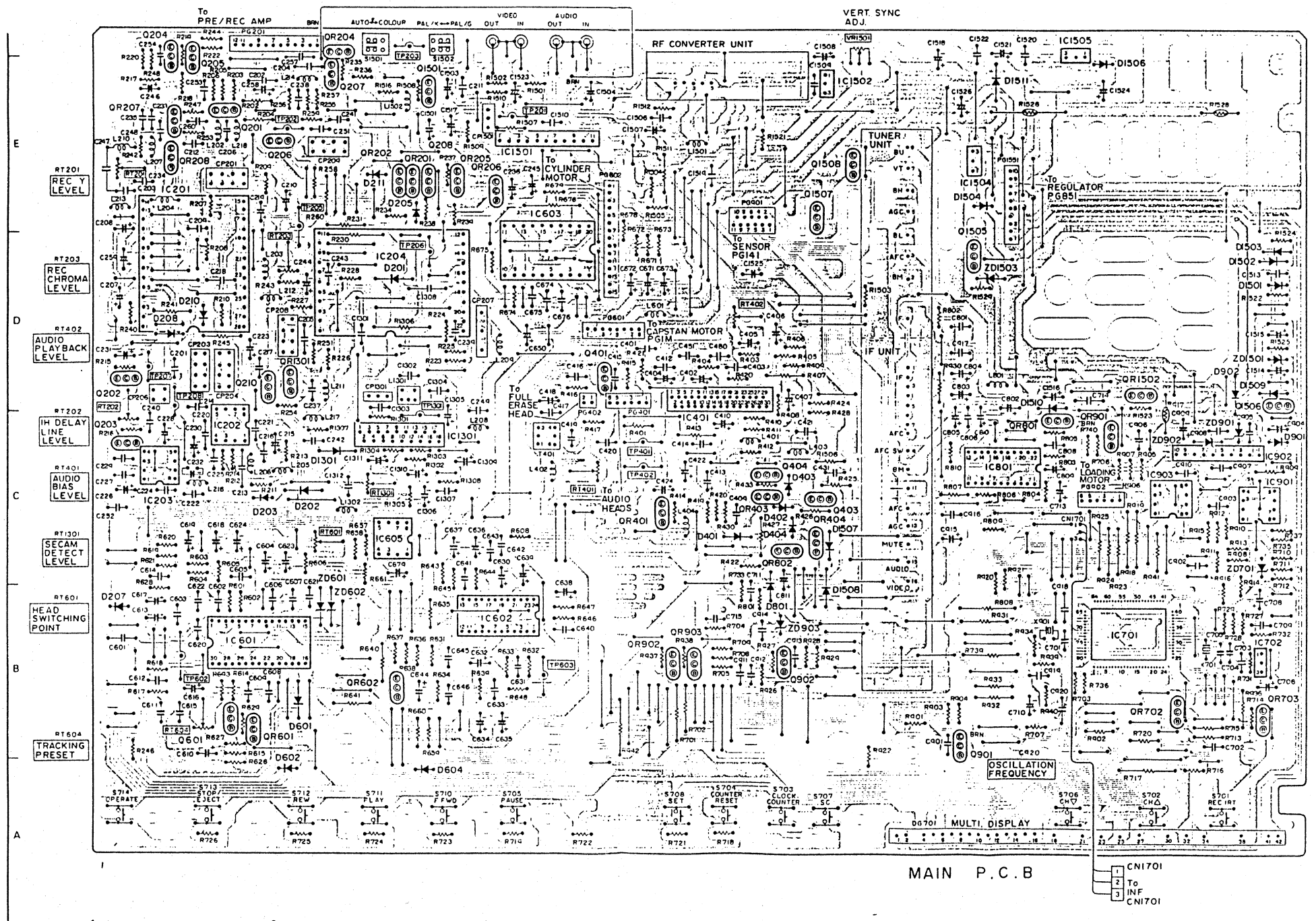
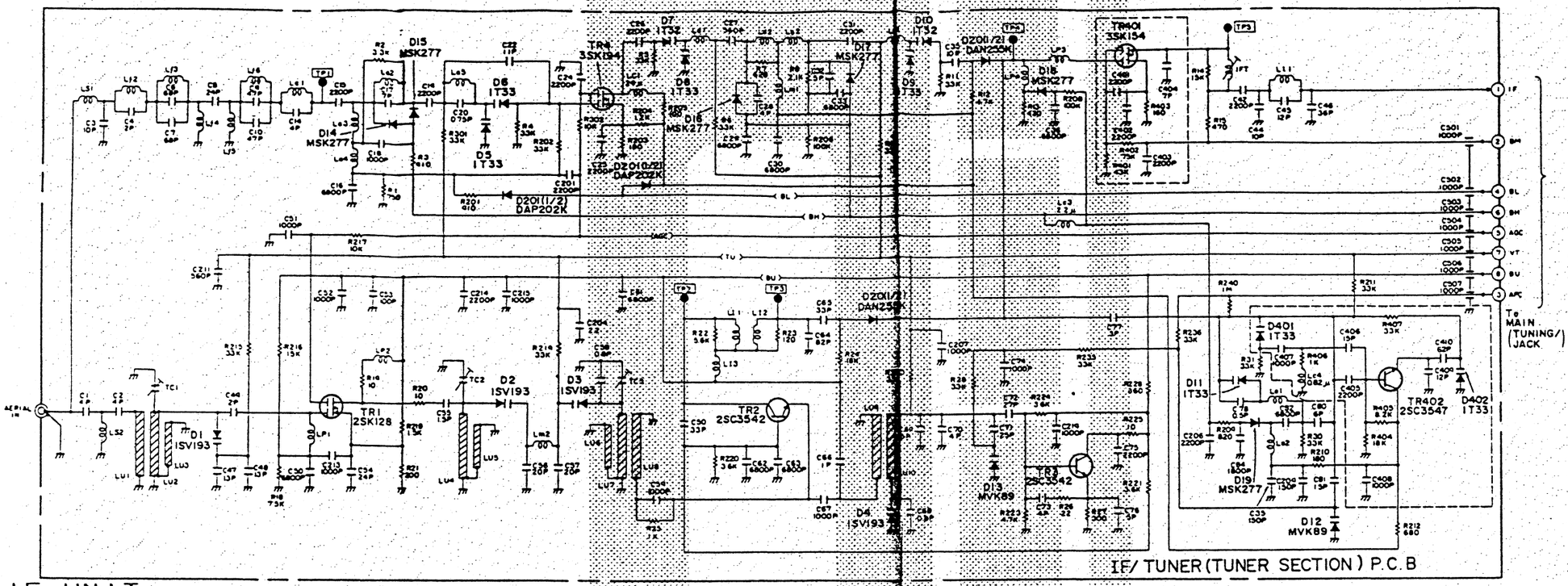
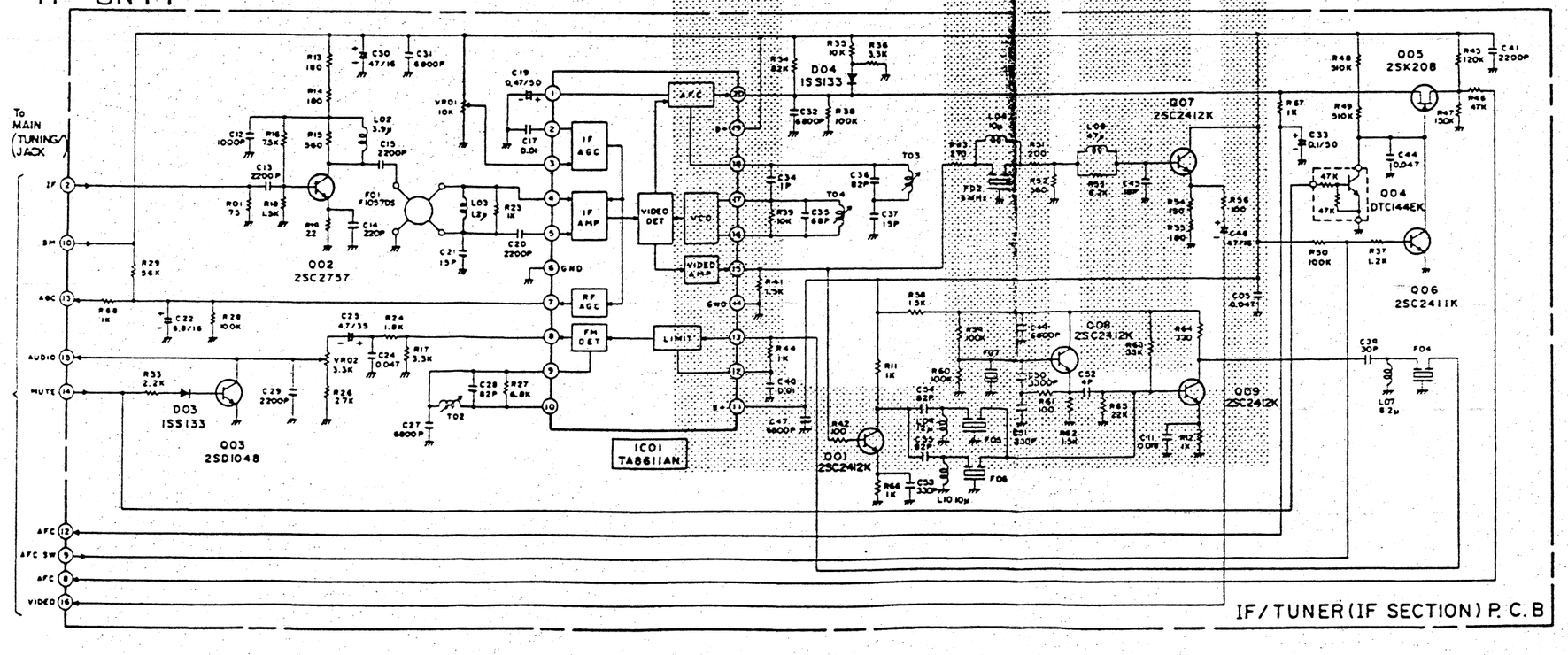


MAIN CIRCUIT BOARD 5-16 5-17 MAIN CIRCUIT BOARD

TUNER UNIT



IF UNIT



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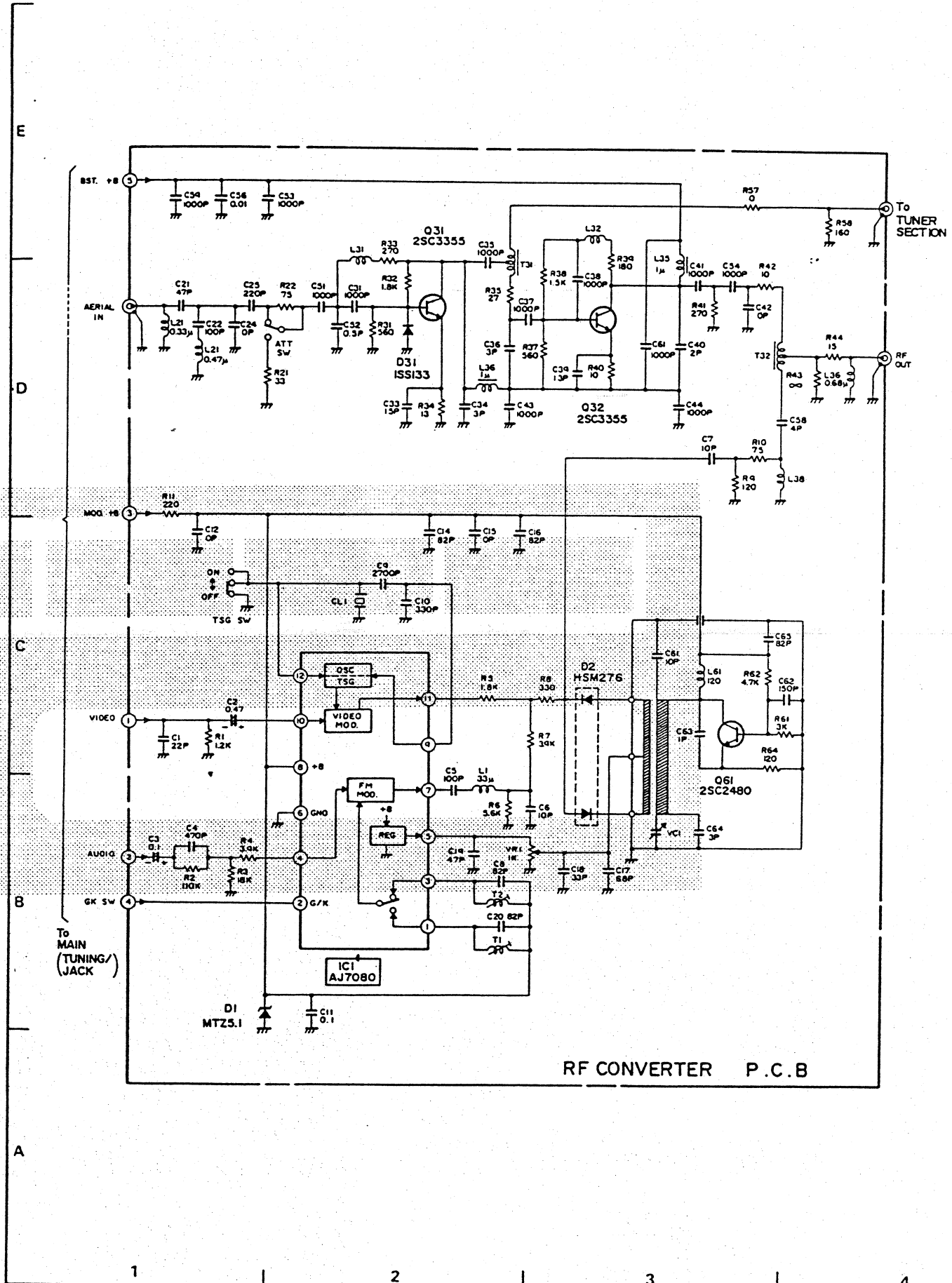
RF CONVERTER



CHASSIS SECTION